

IN THE CLAIMS

1. (Currently amended) A self-routing communication network, comprising:
  - a plurality of nodes;
  - a plurality of star couplers each having a plurality of inputs and a plurality of outputs;
  - and
  - communication paths coupled between the plurality of star couplers and the plurality of nodes for communication therebetween of frames of information, wherein
    - the communication paths include at least one alternative communication path;
    - the star couplers each include an input detector to sense which input of the plurality of inputs of the star coupler first receives a frame of information and for passing only the frame of information first received; and
    - the frames of information each have a frame-start-sequence, and the star couplers each further include a frame-start-sequence changer to change the frame-start-sequence before outputting the frame such that an interconnection failure is diagnosable by analyzing the frame-start-sequence, the frame-start-sequence changer comprising a shortener to reduce the size of the frame-start-sequence by a predetermined amount.
2. (Canceled)
3. (Canceled)
4. (Original) The self-routing communication network of claim 3, wherein the predetermined amount comprises 2 bits.
5. (Previously Presented) The self-routing communication network of claim 3, wherein the shortener comprises a clock to time an occurrence of the predetermined amount of the frame-start-sequence.
6. (Previously Presented) The self-routing communication network of claim 3, wherein the shortener comprises a bit detector to detect an occurrence of the predetermined amount of the frame-start-sequence.

7. (Previously Presented) The self-routing communication network of claim 1, wherein the network is based on a deterministic media access scheme.
8. (Previously Presented) The self-routing communication network of claim 1, wherein the network is arranged for real-time communication.
9. (Currently Amended) A star coupler for use in a self-routing communication network having a plurality of nodes coupled via communication paths and a plurality of star couplers for communication of frames of information between the nodes, the star coupler comprising:  
~~the star coupler having~~ a plurality of inputs and a plurality of outputs, ~~wherein~~  
the star coupler ~~includes~~ including an input detector to sense which input of the plurality of inputs of the star coupler first receives a frame of information and for passing only the frame of information first received, ~~and;~~ wherein  
the frames of information each have a frame-start-sequence, and the star coupler further includes a frame-start-sequence changer to change the frame-start-sequence in a predetermined manner before outputting the frame of information, the frame-start-sequence changer comprising a shortener to reduce the size of the frame-start-sequence by a predetermined amount, whereby interconnection failure in the network is diagnosable by analyzing the frame-start-sequence.
10. (Canceled)
11. (Original) The star coupler of claim 10, wherein the predetermined amount comprises 2 bits.
12. (Previously Presented) The star coupler of claim 10, wherein the shortener comprises a clock to time an occurrence of the predetermined amount of the frame-start-sequence.
13. (Previously Presented) The star coupler of claim 10, wherein the shortener comprises a bit detector to detect an occurrence of the predetermined amount of the frame-start-sequence.
14. (Previously Presented) The star coupler of claim 9, wherein the network is based on a deterministic media access scheme.

15. (Previously Presented) The star coupler of claim 9, wherein the network is arranged for real-time communication.